

1       **51891/GSL/I122**

WHAT IS CLAIMED IS:

5           1.    A film advance mechanism comprising  
              film input mechanism for moving film along a path past an  
              aperture;  
              film take-up mechanism taking up film having passed the  
              aperture;  
10           first and second rows of register pins arranged in linear  
              fashion along opposite edges of the path between the film  
              input mechanism and the film take-up mechanism for engaging  
              perforated openings on the film; and  
              a rotary air valve adjacent the film input mechanism for  
15           advancing the film by air.

              2.    The film advance mechanism of claim 1 wherein the  
              film is formed into a loop by closure of the rotary air valve  
              with the loop propelled past the aperture by opening of the  
20           rotary air valve.

              3.    The film advance mechanism of claim 1 further  
              comprises an air pressure source which provides a constant  
              flow of air to the rotary air valve as the loop of film is  
25           formed to propel the loop of film past the aperture.

              4.    The film advance mechanism of claim 2 wherein the  
              loop in the film is metered by opening and closing the rotary  
              air valve relative to opening and closing a shutter.  
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              5.    The film advance mechanism of claim 1 wherein the  
              rotary air valve operates at a pressure of about 2 to about 3  
              inches of water.

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6.    A method for advancing film in a motion picture device such as a camera or projector, comprising:

5       providing a take-off spool to supply film;  
      forming a loop in the film at an entrance to an aperture position by closure of a rotary air valve.

      blowing the loop across the aperture position and toward a film take-up spool by opening the rotary air valve; and  
10      releasing successive loops of film to be blown across the aperture position by timing the opening and closing of the air valve relative to opening and closing a shutter.

7.    The method of claim 6 further comprising delivering  
15     a constant source of air to the rotary air valve.

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